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Sally K. Ride Papers - STS-51L Mission Operations Manual

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VB. STS 51-L Mission Operations

Introduction

This portion of the report addresses the activities conducted after the planning and preparation functions had been completed. The general type of support provided by the operations community during the prelaunch countdown and during the portion of the mission actually flown was typical of similar missions flown and did not require any unusual activities.

1. Prelaunch Activities

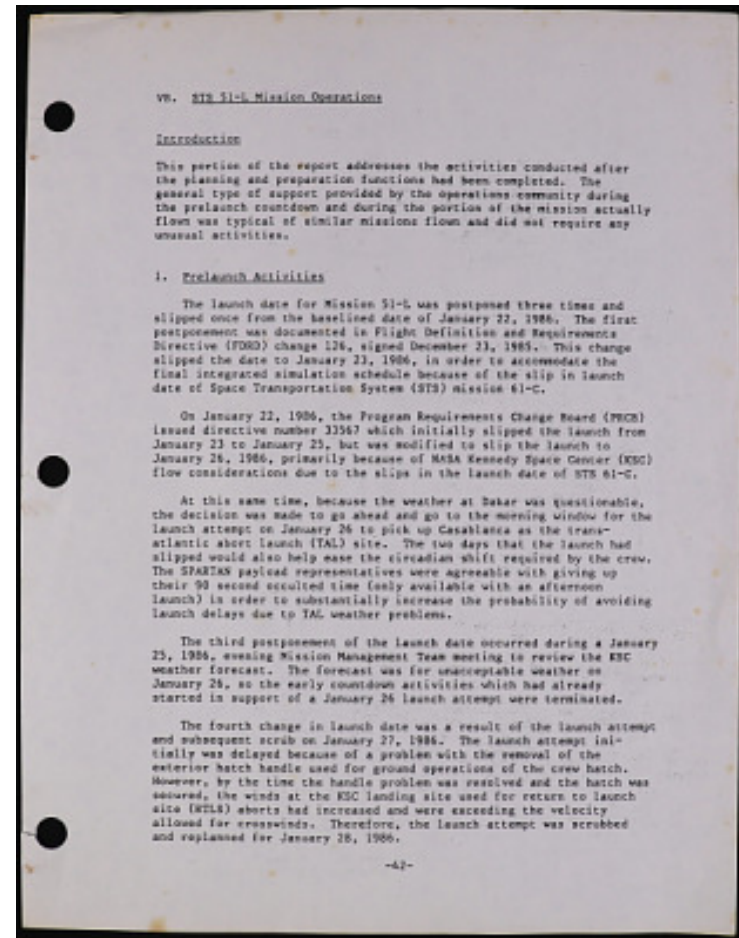
The launch date for Mission 51-L was postponed three times and slipped once from the baselined date of January 22, 1986. The first postponement was documented in Flight Definition and Requirements Directive (FDRD) change 126, signed December 23, 1985. This change slipped the date to January 23, 1986, in order to accommodate the final integrated simulation schedule because of the slip in launch date of Space Transportation System (STS) mission 61-C.

On January 22, 1986, the Program Requirements Change Board (PRCB) issued directive number 33567 which initially slipped the launch from January 23 to January 25, but was modified to slip the launch to January 26, 1986, primarily because of NASA Kennedy Space Center (KSC) flow considerations due to the slips in the launch date of STS 61-C.

At this same time, because the weather at Dakar was questionable, the decision was made to go ahead and go to the morning window for the launch attempt on January 26 to pick up Casablanca as the transatlantic abort launch (TAL) site. The two days that the launch had slipped would also help ease the circadian shift required by the crew. The SPARTAN payload representatives were agreeable with giving up their 90 second occulted time (only available with an afternoon launch) in order to substantially increase the probability of avoiding launch delays due to TAL weather problems.

The third postponement of the launch date occurred during a January 25, 1986, evening Mission Management Team meeting to review the KSC weather forecast. The forecast was for unacceptable weather on January 26, so the early countdown activities which had already started in support of a January 26 launch attempt were terminated.

The fourth change in launch date was a result of the launch attempt and subsequent scrub on January 27, 1986. The launch attempt initially was delayed because of a problem with the removal of the exterior hatch handle used for ground operations of the crew hatch. However, by the time the handle problem was resolved and the hatch was secured, the winds at the KSC landing site used for return to launch site (RTLS) aborts had increased and were exceeding the velocity allowed for crosswinds. Therefore, the launch attempt was scrubbed and replanned for January 28, 1986.





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